



THE COMMONWEALTH OF MASSACHUSETTS
WATER RESOURCES COMMISSION
100 CAMBRIDGE STREET, BOSTON MA 02114

Meeting Minutes for December 10, 2009

Minutes approved March 11, 2010

Members in Attendance:

Kathleen Baskin	Designee, Executive Office of Energy and Environmental Affairs
Anne Carroll	Designee, Department of Conservation and Recreation
David Terry	Designee, Department of Environmental Protection
Gerard Kennedy	Designee, Department of Agricultural Resources
Thomas Cambareri	Public Member
John Lebeaux	Public Member

Others in Attendance:

Michele Drury	DCR	Dale Young	EEA
Linda Hutchins	DCR	Margaret Kearns	DFG/DER
Bruce Hansen	DCR	Peter Weiskel	USGS
Marilyn McCrory	DCR	Jennifer Pederson	Massachusetts Water Works Assn.
Margaret Callanan	EEA	Eric Hooper	Sharon DPW & Mass. Water Works
Vandana Rao	EEA	Pam Heidell	MWRA
Duane LeVangie	DEP	Lexi Dewey	Water Supply Citizens Advisory Committee
Karen Peltó	EEA	Paul Lauenstein	Neponset River Watershed Assn.
		Margaret Van Deusen	Charles River Watershed Assn.

Agenda Item #1: Executive Director's Report

Baskin provided an update on the Sustainable Water Management Initiative. She noted a clarification issued by MassDEP on November 3, 2009, on the safe yield methodology. MassDEP, in cooperation with a working group of the Water Management Act Advisory Committee, has completed the first step announced in the clarification: an interim safe yield determination. This interim determination is intended to ensure that allocation decisions made over the next year will not substantially change withdrawal scenarios, allowing MassDEP time to develop a long-term safe yield methodology. On December 15, 2009, a technical work group will begin its work on the long-term safe yield methodology, with a firm deadline for completion of October 31, 2010. MassDEP will manage the effort related to Safe Yield. The technical work group will also develop streamflow criteria, building on work done over the last decade by WRC staff, USGS, and others. Finally, the technical work group will also provide advice on allocation to the stakeholder committee, which will, in turn, advise the Secretary of Energy and Environmental Affairs and the Water Resources Commission. A combined meeting of the technical work group and the stakeholder committee will take place on January 5, 2010.

Hansen provided an update on the hydrologic conditions for November 2009. Rainfall was 80% of normal statewide, with some variation across the state. The hurricane season ended November 30, with only nine named storms, the fewest since 1997. Groundwater and

streamflows were generally normal or above normal, and reservoir levels were above normal. It is unlikely that drought conditions will develop in Massachusetts through February 2010.

Baskin noted that the town of Norton has filed a Notice of Project Change with the MEPA office seeking to purchase desalinated water from the Taunton River desalination project (known as the Aquaria plant) in Brockton. Under the terms of the Water Resources Commission's approval of the Aquaria project in 2003, entities seeking less than 1 mgd are not required to submit a full interbasin transfer request, but must implement a water conservation plan. Norton has implemented most of the commission's requirements.

Agenda Item #2: Presentation: Restoration Accomplishments from Natural Resource Damage Recoveries

Young and Peltó provided an overview of the Natural Resource Damage (NRD) Recovery program of the Executive Office of Energy and Environmental Affairs. Young outlined the statutory basis for the program in federal and state law and explained that a party that releases oil or hazardous materials or substances is liable for any injury, destruction or loss of natural resources. She explained that natural resource damages claims can be initiated only by the Trustees of Natural Resources, which include federal and state government entities and federally recognized tribes. She outlined the steps in the process of making natural resource damage claims, which include assessing the injury, quantifying damages, negotiating a settlement with the responsible parties, and restoring the resources that have been injured.

Young explained the difference between natural resource damage recovery and cleanup, noting that restoration activities complement cleanup activities. She cited the 2003 oil spill in Buzzards Bay as an example, where the purpose of the NRD component was to restore the resources that were injured to pre-release conditions. She noted that the program has settled thirteen cases across Massachusetts, with damages of \$47 million used for restoration. She provided examples of restoration cases, which include permanent protection of aquifer recharge areas through land acquisition. She said the program has a goal of addressing more groundwater contamination cases and is working on a methodology to determine a dollar value for these injuries. NRD recoveries have protected biological resources and wildlife habitat, restored recreational uses, and funded environmental education and environmental stewardship activities.

To illustrate how the program works, Peltó described a case study involving a settlement with Textron related to injury to groundwater resulting from the contractor's operations at the Massachusetts Military Reservation on Cape Cod. The involvement of multiple federal and state authorities contributed to the complexities of the case and obtaining a settlement agreement. Following the settlement, the Trustees solicited proposals for restoration projects, and two of eleven proposed projects have been recommended for funding. The recommended projects involve aquifer protection through the acquisition of land within the Zone II. Two additional planning projects were also recommended for funding from other sources.

Baskin asked Young and Peltó to elaborate on the methodology used to calculate damages. Young replied that the program has been working with a consultant, Industrial Economics, on a methodology and intends to convene a stakeholder group to develop a methodology. She added that, for groundwater, many components must be taken into consideration in assessing value. Baskin expressed interest in any reports on this methodology. Peltó added that it would be helpful if the Water Resources Commission or water policies could address the value of groundwater ecologically and economically as well as the recharge of groundwater and rates of recharge.

In response to questions from Van Deusen, Young stated that the program can bring natural resource damage claims under MGL Ch. 21E alone and that the state can make claims against the federal government, though such claims present many challenges. Questions from others addressed the range of potential cases, concerns about specific contaminants, and the threshold for damages. Young noted that MassDEP's Bureau of Waste Site Cleanup maintains a list of releases of oil or hazardous materials, which provides an indication of resources that may be injured. She said that if a maximum contaminant level has been established for a specific contaminant and that level has been exceeded, the program can make a stronger case regarding injury to groundwater resources.

Cambareri commended Young and Peltó for the program's work on the Massachusetts Military Reservation case and asked for clarification on the review process and timeline for the restoration plan. Young responded that federal law requires a comment period on a draft plan. There will be a public meeting on the Textron Restoration Plan in early January 2010.

Van Deusen asked for clarification on the difference between remediation and restoration. Young and Peltó explained that remediation is overseen by USEPA or MassDEP, which makes decisions about the level of treatment, while restoration represents compensation for the injury, and funds can be used to prevent future contamination or to restore resources elsewhere. The standard is to replace, restore, or acquire equivalent resources. Implementation of projects is generally through a formal request for responses and contracting process, with some restoration projects proposed and implemented by state agencies.

Agenda Item #3: Presentation: Results of the Massachusetts Water Indicators Project

Baskin congratulated DCR and USGS on the pending release of the Massachusetts Water Indicators (MWI) report, and she congratulated MassDEP and USGS on the pending release of the Sustainable Yield Estimator (SYE) tool.

Hutchins reviewed the work that led to development of the Massachusetts Water Indicators and thanked the Stressed Basins Reclassification Task Force, which has been working on these efforts for more than two years.

Weiskel acknowledged Hutchins for her critical involvement in the MWI project. He reviewed the project's objectives, which were to develop, compile, and interpret indicators of basin alteration. The analysis covered indicators of streamflow alteration, habitat fragmentation, and water quality for Massachusetts stream basins. He reviewed data sources for each of these indicators. He then discussed each of the indicators in detail.

He reviewed nine statistical indicators of streamflow alteration – based on groundwater withdrawals, surface-reservoir withdrawals, and wastewater discharges. He explained how the degree of alteration associated with water use (both withdrawals and discharges) was calculated. All flows were obtained using the SYE application. He showed maps of potential flow alteration for each statistic, noting that alteration encompasses both depletion and accretion (from surcharges associated with wastewater discharges). He noted that there is a great potential for depletion of the August median flow in many areas of the state, and, at the same time, pointed out large areas in central and western Massachusetts where the percentage of potential flow alteration is relatively low. He also pointed out that flow depletion does not necessarily equate to

dry stream conditions; it can also indicate water in the system that is not flowing. He also pointed out the difference that basin scale can make in interpreting the data.

Weiskel then reviewed the potential effect of dams and impoundments on streamflow regimes and habitat, separate from the effects of surface-water withdrawals alone. These indicators include the storage ratio of dams and impoundments compared to the amount of estimated average annual natural inflow, and dam density, or the number of dams per stream mile, the latter an indicator of aquatic habitat fragmentation and habitat alteration.

Another indicator of alteration is impervious cover, which can affect streamflow regimes, water quality, and fish community composition. Weiskel also discussed water quality as an indicator of basin alteration. The state's list of impaired waters, compiled in accordance with Section 303(d) of the Clean Water Act, was used to indicate water quality at the subbasin level. He displayed two water quality indicators: the percentage of total stream miles that had been assessed for the 303(d) list and the percentage of assessed stream miles that were listed as impaired.

Weiskel concluded by outlining products of the MWI project: a USGS Scientific Investigation Report, which will document and interpret all indicators at the statewide scale; and a digital map viewer and Excel workbook of all indicators. Estimated date of availability for printed versions of these products is late January or early February 2010. He outlined some of the limitations of the analysis, and said these would be documented in the reports.

Pederson asked how MWI will be used and whether the data will be linked to WMA permit conditions. Baskin responded that the effort to classify streams superseded the stressed basins designations, and this will incorporate the water indicators. She added that input from the Water Resources Technical Subcommittee would be sought. Carroll requested that the Commission also weigh in on how to incorporate this new information into any basin stress classification system. LeVangie noted that MassDEP has de-emphasized references to basin stress in WMA permitting by establishing statewide performance standards for residential consumption and unaccounted-for-water.

Lauenstein asked if a significant deviation from or congruence with the stressed basins classification could be discerned from the MWI maps. Weiskel responded that the results of the MWI analysis were, to a large degree, in congruence with the stressed basins classifications. However, he noted that the MWI differs from the 2001 stressed basins methodology in looking at data on a smaller scale and also considering surcharging, as well as low flows.

Agenda Item #4: Vote on the Minutes of October 2009

With the completion of a quorum, Baskin invited a motion to approve the meeting minutes for October 8, 2009.

V O T E	A motion was made by Lebeaux with a second by Kennedy to approve the meeting minutes for October 8, 2009.
	The vote to approve was unanimous of those present.

Agenda Item #5: Discussion: WRC Work Plan for 2010

Baskin stated that the 2010 work plan for Water Resources Commission staff will focus on a few key priorities. Carroll reviewed these priorities: the sustainable water management initiative, including assisting with the development of streamflow criteria and the safe yield methodology;

continuing work on water needs forecasts; and review of submittals related to the Interbasin Transfer Act. Other efforts will address water policy issues that have been raised in past commission meetings, compilation of data by basin from the water needs forecasting efforts, and ongoing efforts such as the USGS Cooperative Program, the Massachusetts Precipitation Monitoring Program, water conditions and drought monitoring; the EPA Targeted Watersheds Grant program; and interagency work groups.

Baskin asked WRC staff to comment on the water needs forecasting effort and whether any efficiencies have been found in the process. Drury commented that staff has completed forecasts for communities in seven basins and is now very familiar with the questions that need to be asked and the issues that need to be addressed. She discussed the upcoming schedule of forecasts, noting that a substantial effort will be required over the next two years.

LeVangie commented that, beginning in 2010, those who are required to file Annual Statistical Reports with MassDEP will have the option of filing electronically. He added that MassDEP is still working out how to manage the electronic data and make it available. Baskin asked if filers will be required to submit data electronically. Terry replied that there are still many challenges to be addressed in fully implementing an electronic filing system, and that some of the smaller systems and Non-Transient Non-Community systems may not have the capability to file electronically for some time. McCrory commented that staff has become comfortable with the water needs forecasting methodology and have developed tools to streamline the development of forecasts. She added that as staff plan for the water needs forecasting effort for communities on Cape Cod and the Islands, some additional effort will be required to adapt the methodology to address fluctuations in seasonal populations in these communities. She noted that, while having data electronically will help in reducing the errors and inconsistencies in reporting associated with the paper forms, the data input piece is the least time-consuming part of the process of developing a forecast, with the more time-consuming piece involving discussions with various stakeholders and data interpretation. Carroll added that staff is looking into convening a technical advisory committee to help in assessing demographic projections.

Baskin noted that the 2010 Work Plan will be presented for a vote at the January meeting.

Meeting adjourned

Attachments distributed or presented at meeting:

- Current Water Conditions in Massachusetts, December 10, 2009
- Presentation by Peter Weiskel, USGS, in cooperation with Massachusetts DCR: Indicators of Streamflow Alteration, Habitat Fragmentation, Impervious Cover, and Water Quality for Massachusetts Stream Basins
- Presentation by Dale Young and Karen Pelto, EEA, on the Natural Resource Damage Recovery program
- Table: WRC 2010 Work Plan for Commission Discussion